

Revisional Notes on Robber Flies of the Genus *Stenopogon* (Diptera; Asilidae).

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The Australian species of the genus *Stenopogon* are remarkably alike in shape, colour, and general structure; therefore there are few characters available for the ready determination of various described forms, most of which have had their names placed as synonyms of *S. elongatus* Macquart.

The genus was first revised by Ricardo, who recognised only two species, *elongatus* Macquart and *nicoteles* Walker, whereas White subsequently permitted three, the third being the same as that upon which *elongatus* was first established. Macquart's description reads to the effect that the two first pair of femora are red, the anterior ones black basally, whilst the posterior femora are black with red below at the apex. White's description is identical except that he does not refer to the red spot that occurs on the female at the apex of the posterior femora, usually confined to the underside. Both Macquart and White omit the very small black area at the base of the intermediate femora, and indeed White states that this segment is entirely red.

Macquart added two varieties under *elongatus*, both from Tasmania, one having entirely black femora and is undoubtedly that described later by Bigot as *fraternus*, the second being *lanatus* Walker in which all the femora are marked black and red, the intermediate ones being almost entirely red as in the typical *elongatus*. The latter one, *lanatus*, is undoubtedly the form that White mistook for the typical *elongatus*, for he added a description of *fraternus* as a variety and made the original *elongatus* his *flavipennis*.

Dasyopogon digentia, and *D. agave* Walker, are distinct species, as also probably is *D. thalpius* Walker, all from Western Australia. The last mentioned is very close to *flavipennis* White, and is only known to me from the female, in consequence of which I have not been able to fully establish its specific identity, whilst those specimens from Queensland that agree with the description of the two first-mentioned may possibly not belong there but it is considered expedient to retain them as here placed until the males are known from the type locality.

Three undescribed species are known, only one of which is included below. The other two are represented by old specimens and are notable on account of the genital characters of the male. One has what appears to be a very short dorsal plate, but closer inspection shows a thin prolongation almost hidden amongst the other parts; the other has an extraordinarily large dorsal plate that extends as far as does the prolongation on that of *nicoteles* and *fraternus*.

The purpose of the present paper is to record the above disentanglement of the identities of early described species. The genital characters, upon which much of this study depends, have not been advanced sufficiently to warrant a fuller account, and some years must pass before the necessary material can be collected for the purpose of finishing these studies. In the meanwhile, specimens are being named in collections in conformity with the plan here adopted, those in various collections in Queensland and in that of the South Australian Museum having already been suitably labelled.

By aid of the following key most of the species will be readily recognised on the characters of the male, but reference to leg characters will usually enable the females to be recognised even if the male is unknown.

1. Moustache almost entirely black; there are some silvery white hairs easily detectable below. All femora black. Male genitalia with a downwardly curved prolongation of the dorsal plate *nicoteles* Walker.
Moustache conspicuously yellow, usually entirely so 2.
2. Dorsal plate with a downwardly curved prolongation. All femora black. Face often with black hairs just at the base of the antennæ. Last two segments on the female abdomen sometimes reddish .. *fraternum* Bigot.
Dorsal plate simple; without prolongation 3.
3. Dorsal plate emarginate at the apex. Face with black hair above and on each side of the otherwise yellow moustache. All femora with the apical half red, basal half black *emarginatus* n.sp.
Dorsal plate rounded at the apex. Face always with hair entirely yellow, at most a few black ones at the base of the antennæ 4.
4. Posterior femora, as well as the anterior and intermediate ones, apically red and basally black *lanatus* Walker.
Posterior femora entirely black, or rarely a little red at the extreme apex usually confined to the lower side 5.
5. Intermediate femora almost entirely red, black only at the extreme base; anterior femora red apically *flavipennis* White.
Intermediate femora mainly or entirely black 6.
6. Anterior and intermediate femora red only at the extreme apex, the red being separated by a very defined straight line *digentia* Walker.
Anterior and intermediate femora entirely black *agave* Walker.

STENOPOGON NICOTELES Walker.

Dasyopogon nicoteles Walker 1849, p. 320. *Stenopogon nicoteles* Ricardo 1912, p. 157.

Hab.—Western Australia; Perth one male, 1911-2.

STENOPOGON FRATERNUM Bigot.

Dasygogon elongatus var. (first) Macquart, suppl. 2, 1847, p. 34.
Stenopogon elongatus var. White, 1916, p. 164. *Stenopogon elongatus*
 Hardy, 1927, p. 309, fig. 3. *Stenopogon fraternum* Bigot, 1878, p. 421.

This is the first so-called variety of *elongatus* mentioned by Macquart and also White's variety; the locality for both is Tasmania, which leaves little doubt concerning this identification. It occurs as far north as Sydney and so would appear to be that form upon which Bigot's description was based. Bigot mentions the hair at the base of the antennæ is black, which is taken to mean on the face and front, thus indicating the present species rather than *agave*. Judging from genital characters, this species appears to represent, on the eastern side of Australia, a type that is represented on the western side by *S. nicoteles*.

Hab.—Tasmania: Hobart, Bream Creek, Wynyard, January and February 1916, 1918, and 1924. New South Wales: Sydney, October, and Blue Mountains, November 1918, 1919, and 1924.

STENOPOGON EMARGINATUS n.sp.

This species conforms to others of the genus in all general characters, but is at once distinguished by the male genitalia which have the dorsal plate truncate and with a very definite emargination at its apical border. Moreover the hairs on the face are black below the antennæ and on the tubercle, where they surround the otherwise yellow moustache. From the base to about two-thirds of their length, all the femora are black, from thence to the apex red.

Hab.—Victoria: Gisborne, 1 male, 11-3-17 (G. Lyell).

STENOPOGON LANATUS Walker.

Dasygogon elongatus var. (second) Macquart, suppl. 2, 1847, p. 34.
Stenopogon elongatus White, 1916, p. 163, typical form only. *Dasygogon lanatus* Walker 1849, p. 318.

This species is readily distinguished by the intermediate femora being mainly red, in conjunction with the half red half black posterior femora.

Hab.—Tasmania: Wedge Bay (pair in copula), January 1918, Hobart, January 1914, Swansea. South Australia: Murray Bridge and Callington, November 1887 (Tepper); Angas Plains. Western Australia: Perth, November 1912; Capel River.

STENOPOGON FLAVIPENNIS White.

Dasygogon elongatus Macquart, suppl. 1, 1847, p. 66, Pl. vii., fig. 6.
Stenopogon elongatus Ricardo 1912, p. 155, part only (name pre-occupied). *Stenopogon flavipennis* White 1917, p. 79.

Asilus elongatus Meigen, was placed under *Stenopogon* by Leew 1847, hence Macquart's name is preoccupied.

The species is recognised by the posterior femora being entirely black, or almost so, in conjunction with the intermediate femora being almost entirely red. The red at the apex of the posterior femora is very inconspicuous, apparently only on the female and usually confined to a spot on the underside.

Hab.—New South Wales: Blackheath and Katoomba, November 1912 and 1919.

STENOPOGON THALPIUS Walker.

Dasyopogon thalpius Walker, 1849, p. 317.

This species is very close to if not identical with *S. flavipennis* White. It is only known to me from the female, three specimens of which sex differ in the entire absence of the red at the apex of the posterior femora, and in the larger amount of black at the base of the intermediate pair. It is considered better to keep these names distinct rather than use Walker's for the eastern form with the possibility of having to revert later to the name given by White.

Hab.—Western Australia: Perth, November 1912, three females.

STENOPOGON DIGENTIA Walker.

Dasyopogon digentia Walker, 1849, p. 316. *Dasyopogon flavifacies* Macquart, suppl. 4, 1850, p. 64, Pl. vi., fig. 6.

In this species the anterior and intermediate femora are red only at the extreme apex, and the very defined line between the colours is remarkably straight. I have not seen it from Western Australia, but Queensland specimens conform to the described characters. Macquart's record from Tasmania is evidently erroneous, as only two species occur in that island.

Hab.—Queensland: Brisbane, September 1921, October 1927.

STENOPOGON AGAVE Walker.

Dasyopogon agave Walker, 1849, p. 317.

The male is not known to me from Western Australia, which is Walker's locality, but the female bears a certain distinctive appearance that suggests the Queensland forms possibly do not belong to it; I have, however, not been able to find any characters to separate them other than size. South Australian specimens are of the same form as those of Queensland.

Considerable difficulty will be found in separating the females from those of *S. fraternum*, and I have been unable to find any reliable

characters whereby this may be done. The range of the species will help to a certain extent, but they overlap in the Blue Mountains at least. In *fraternum* there are a few black hairs on the face just below the antennæ and are rarely missing, whereas they are rarely present on *agave*. Also there is a marked tendency in *fraternum* from Tasmania to have the last two segments of the abdomen reddish, but this does not appear on those from New South Wales.

Hab.—Western Australia: Hamel (without further data), two females in the Queensland Museum. Queensland: Bunya Mountains, December 1925, Brisbane, September and October 1924 and 1927. National Park, December 1921. New South Wales: Blackheath, November 1919. South Australia: Murray River, Lamaroo, and Callington, November 1887 (Tepper); between Karoomba and Peebing.

LITERATURE REFERRED TO.

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